## (19) World Intellectual Property Organization International Bureau





(43) International Publication Date 20 January 2005 (20.01.2005)

## (10) International Publication Number WO 2005/005868 A1

- F16H 61/04, (51) International Patent Classification7: 59/16, B60K 41/22, G01L 1/22 // B60K 41/28
- (21) International Application Number:

PCT/GB2004/002946

(22) International Filing Date:

8 July 2004 (08.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0316004.1

8 July 2003 (08.07.2003)

0316403.5

14 July 2003 (14.07.2003) GB

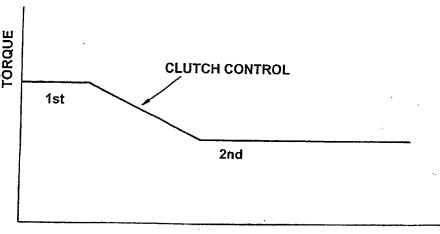
- (71) Applicant (for all designated States except US): ZE-ROSHIFT LIMITED [GB/GB]; 7 Darin Court, Crownhill Business Park, Milton Keynes MK8 0AD (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): MARTIN, William, Wesley [NZ/GB]; 22 Goodman Gardens, Woughton on the Green, Milton Keynes MK6 3EP (GB).

- (74) Agent: RAYNOR, Simon, Mark; Urquhart-Dykes Lord LLP, Midsummer House, Midsummer Boulevard, Central Milton Keynes MK9 3BN (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: TRANSMISSION SYSTEM

## Torque vs Time



(57) Abstract: A transmission having a plurality of gear ratios (15, 17), selector means (13) for selectively engaging the gear ratios, clutch means (2) for selectively transmitting drive from a drive source to the transmission, and a control system for controlling a clutch torque limit, said control system being constructed and arranged to automatically adjust the clutch torque limit value before the selector means selects an unengaged gear ratio, to allow relative rotational movement between input and output sides of the clutch if the torque exceeds the predetennined value when the unengaged gear ratio is engaged by the selector means.

TIME

## 

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.